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Echo Made Easy. Results You Can Trust.

ACUSON SC2000 Ultrasound System

Answers for life.

Echo Made Easy.
Results You Can Trust.

Powerful Performance
for Superior Imaging

Streamlined Exams
with Faster Results

Volume Quantification
without Compromise

Defining Tomorrow's
Standards

Introduction

With the premium-performance ACUSON SC2000™ ultrasound system, single-beat, full-volume imaging can now be easily integrated with standard 2D protocols to provide a whole new level of cardiology care. Echo has never been more powerful. You can image the whole heart, for every patient – with no assumptions and no limitations. With IN Focus technology, the ACUSON SC2000 system delivers never-before-seen detail and contrast resolution throughout the entire field of view. Its extraordinary power is combined with unmatched ease and intelligence. Siemens-exclusive technologies – from eSie LVA™ volume LV analysis to eSie PISA™ volume analysis to eSie Echo workflow applications – generate consistent, reproducible results regardless of how difficult the case may be or how many operators perform measurements. This gives you an unprecedented diagnostic solution to deliver the most advanced patient care possible – today and well into the future.

Table of Contents

Powerful Performance for Superior Imaging

Today's cardiology environments are under intense pressure to manage large patient loads, with many technically difficult-to-image patients. Conventional imaging technologies fall short, focusing only on a single focal zone and making it difficult to accurately image the full range of patients.

Delivering image quality that is second to none, the ACUSON SC2000 volume imaging ultrasound system is Siemens' most powerful, versatile cardiology platform, setting a new standard for advanced cardiology care. Using up to 64 parallel receive beams, the system delivers 16 times the processing power of a conventional system.

The platform's superior information rate enables Siemens' exclusive IN Focus imaging technology to automatically focus the entire field of view – both the near field and far field. There is no manual focusing required and no inconsistency in image resolution. The system delivers uniformity throughout the image at all depths to display cardiac structure, motion and blood flow. It processes so much diagnostic information – more than 2.88 gigabytes per second – that it is possible to visualize red blood cells in grayscale as they circulate through the heart chamber. This clinical detail enables the most complete and accurate diagnoses possible. Atrial fibrillation, dyssynchrony and severe mitral regurgitation using volume color can be imaged quickly, quantified accurately and displayed with unrivaled detail.

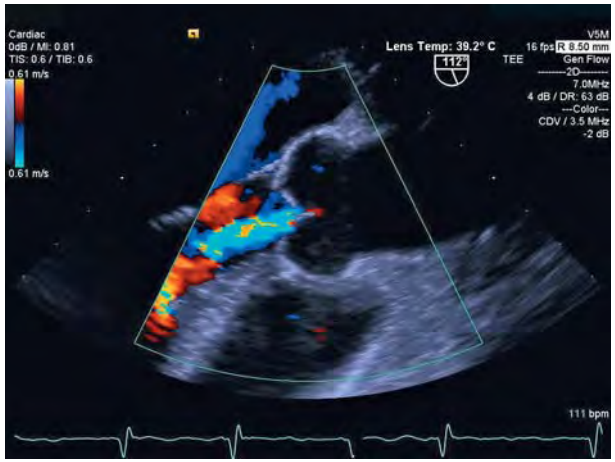
For the first time, volume imaging can easily be integrated with 2D exams to increase the quality of patient care and management across the full spectrum of cases – adult and pediatric echo to vascular, operating room and interventional cardiology.

64
parallel receive beams

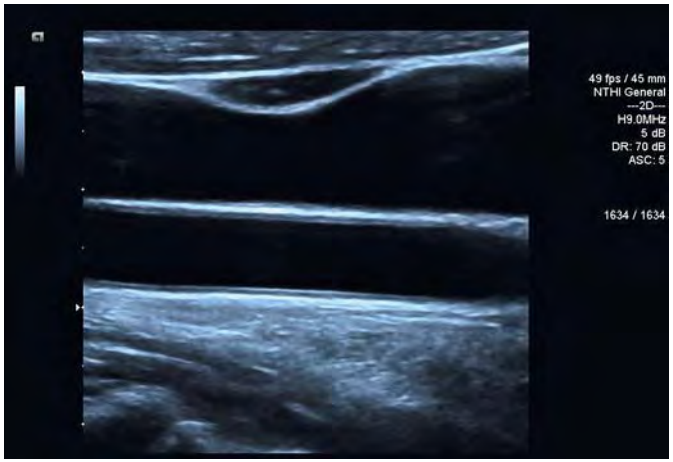
2.88
GB/sec information rate

16
times the processing power

Powerful Performance for Superior Imaging

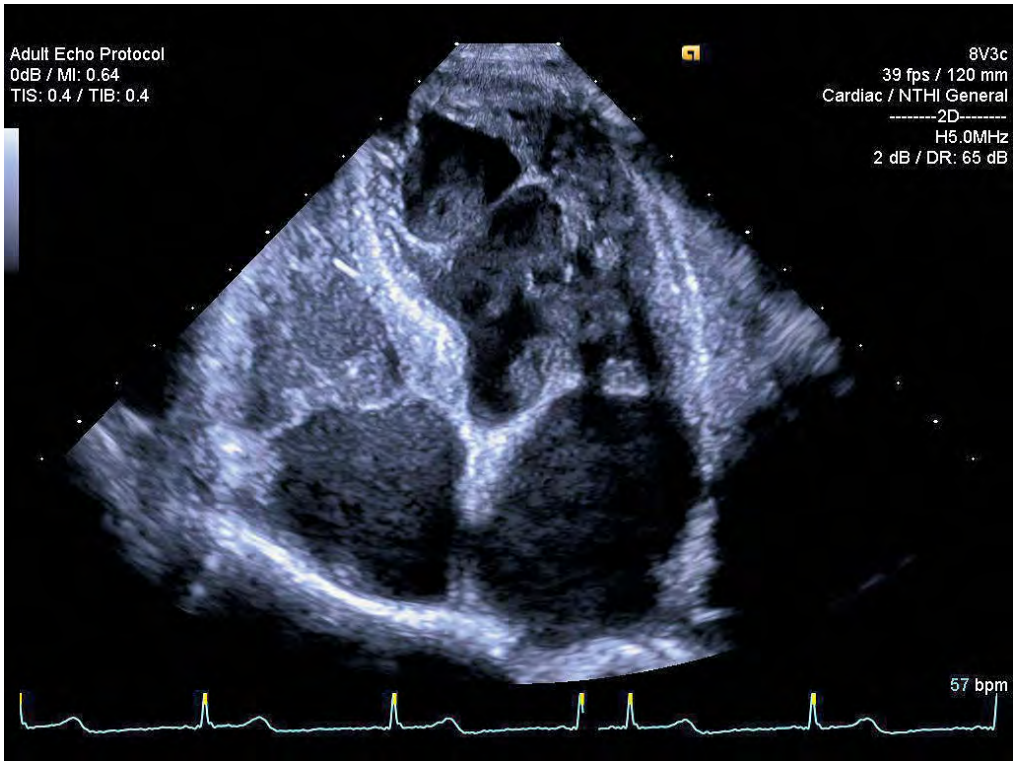


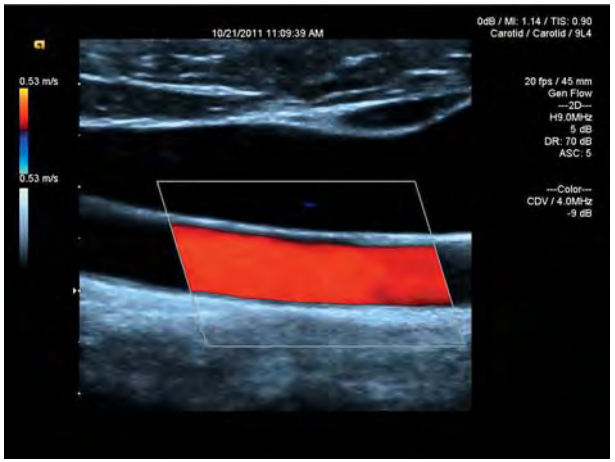
Transesophageal (TEE) imaging with IN Focus technology shows superior color Doppler detail resolution of an aortic valve regurgitant jet.



Carotid artery imaging with the 9L4 transducer. Note the detail of the anterior and posterior intimal lining of the vessel.

IN Focus Technology on the 8V3 transducer shows superior contrast and detail resolution, with uniformity throughout the field of view in the apical four chamber.





Color Doppler imaging in the carotid artery with the 9L4 transducer.

Transesophageal (TEE) Imaging with IN Focus technology. Note the superior contrast in the myocardium and detail resolution of the mitral valve leaflets, with uniformity throughout.

Streamlined Exams with Faster Results

Rising patient numbers, reimbursement pressures and repetitive stress injuries mean that workflow efficiencies are more critical today than ever.

With the ACUSON SC2000 system, we've taken echo workflow advancements to a whole new level. Our eSie Echo solution, comprised of the eSieScan™ workflow protocols and the eSie Measure™ workflow acceleration package, frees sonographers from tedious manual measurement taking, thereby increasing efficiency, consistency and productivity in every exam.

eSieScan workflow protocols allow you to customize exam workflow specifically to your needs. This innovative solution boosts reproducibility and quality by increasing the consistency of results and ensuring that exams are complete. The eSie Measure package automates routine measurements in 2D, M-mode and spectral Doppler. It does so by using advanced pattern recognition and thousands of expert-traced datasets. Keystrokes are reduced, creating less risk of repetitive stress injuries and delivering greater efficiency. The eSie Measure package is fully integrated with the eSieScan workflow protocols so the system automatically and intelligently guides you to complete each step of an exam. With eSie Measure technology, the degree of consistency in measurements is so great that, regardless of operator, results are reproducible.

Together, eSieScan workflow protocols and eSie Measure workflow acceleration package cut routine exam time by as much as six minutes an exam or an hour for every 10 exams performed. This adds up to far fewer keystrokes and less repetitive motion.

It's a whole new standard of workflow ease and efficiency.

Saving

~6

minutes per routine exam

174

measurements with just the Freeze button

LV M-mode

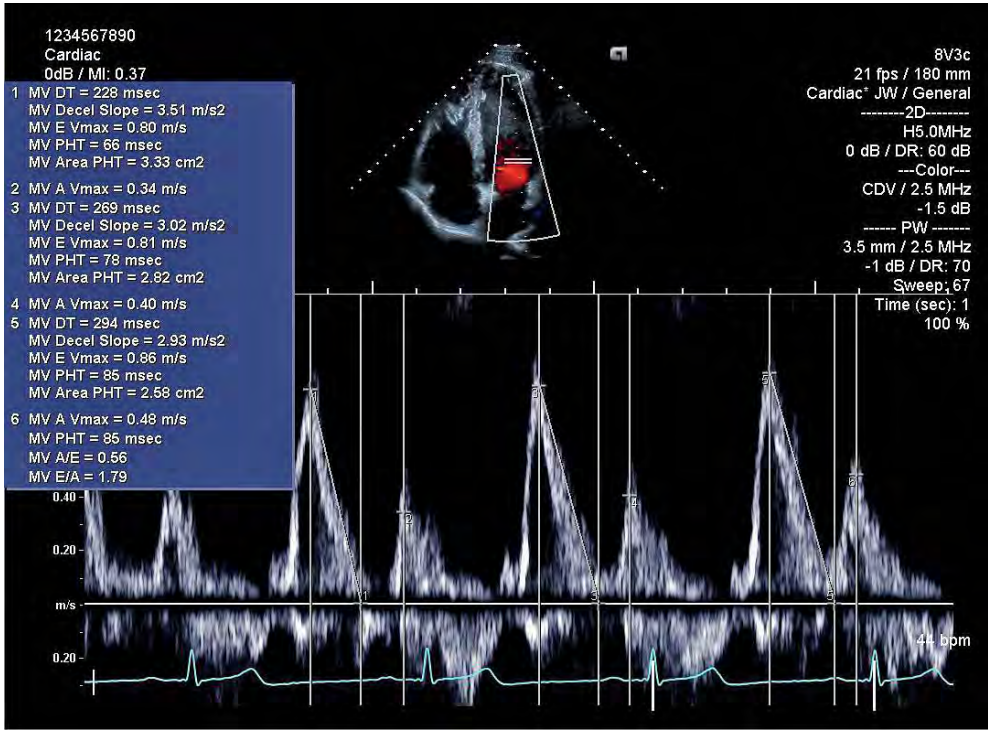
1 click

3 beats

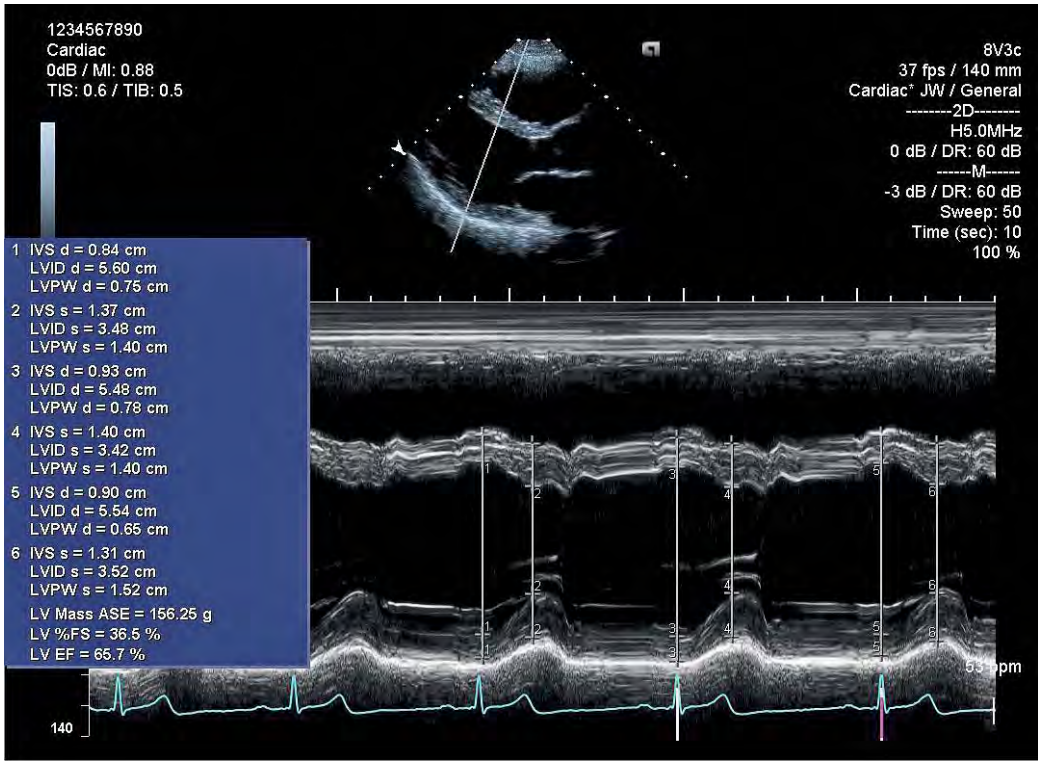
16 measurements

2 seconds

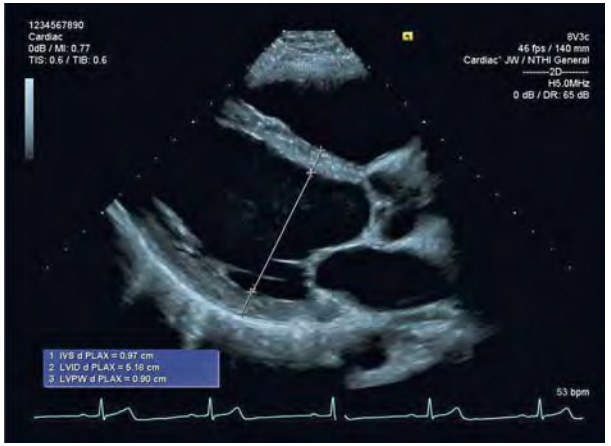
Streamlined Exams with Faster Results



Mitral valve inflow with the eSie Measure workflow acceleration package.



M-mode with the eSie Measure workflow acceleration package automates LV measurements.



2D measurements with the eSie Measure workflow acceleration package.

Volume Quantification without Compromise

Many current 3D systems rely on stitched images to piece together a full volume, resulting in inaccurate geometric assumptions and an inability to image those with arrhythmia.

The ACUSON SC2000 system captures the whole heart, for every patient – with no assumptions and no limitations. In one heart cycle, without stitching or ECG gating, it acquires a full heart volume at a 90 by 90 degree angle and 16 centimeters depth at up to 40 volumes per second. This includes volumetric color flow and volume quantification for the left and right ventricle. Easily integrated into routine adult echocardiography exams, the ACUSON SC2000 system's full-volume, real-time imaging offers new workflow pathways for improved diagnostic confidence. You can treat the full range of cardiology patients, even those with arrhythmia, quickly, accurately and potentially with the need for fewer additional exams.

To fully harness the wealth of volume information generated, the ACUSON SC2000 system features a variety of Siemens' quantification tools:

- **eSie LVA Volume LV Analysis** – A powerful knowledge-based application that aligns the chambers, contours the ventricle and tracks every frame in the volume acquisition to generate the Ejection Fraction in as little as 15 seconds. The full integration of the latest knowledge-based information to detect and track volume contours enables this unmatched one-step calculation, reducing exam time and improving result consistency.
- **Volume Right Ventricular Analysis Package** – A quantitative analysis package designed for the complex anatomy of the right ventricle. It guides the user step-by-step to generate the critical parameters for the right ventricular analysis, providing Ejection Fraction, end diastolic and end systolic calculations. RVA affects left ventricular function and has been shown to be a major factor in clinical outcomes.
- **eSie PISA™ Volume Analysis** – A breakthrough Siemens' volume flow analysis technology that automatically generates true volume Proximal Isovelocity Surface Area (PISA) and calculates Effective Regurgitant Orifice Area (EROA) from 4D color Doppler data. Unlike current 2D PISA technologies which make assumptions about flow convergence, eSie PISA technology enables accurate assessment of the flow convergent surface area for a more detailed calculation of the EROA. eSie PISA requires just two clicks and less than 30 seconds to generate volume PISA without geometric assumptions, providing an accurate measurement of EROA for any valve in the heart.

In addition to these breakthrough quantification applications, the ACUSON SC2000 system supports a variety of other innovative applications that are available for post imaging analysis on the *syngo*® SC2000 Workplace.

The ACUSON SC2000 system is the first cardiology care platform to take echo from display to volume quantification – without compromise.

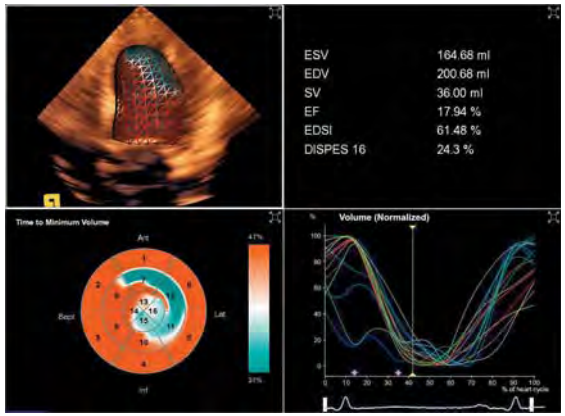
World's
1st
volume PISA analysis

2
clicks to volume PISA results

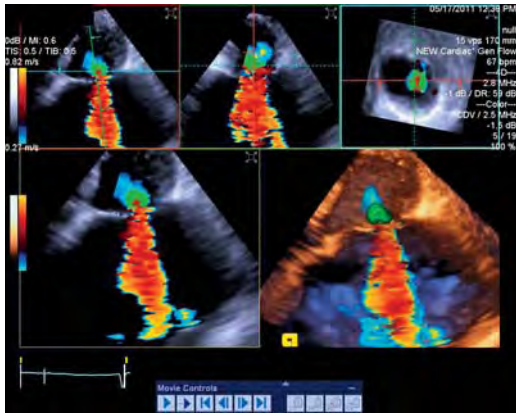
eSie LVA
1 click in under
15 sec

Volumes at
90° x 90°
at
40 vol/sec

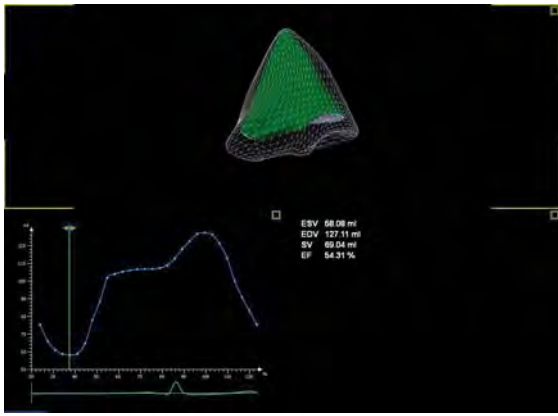
Volume Quantification without Compromise



One click ventricular quantification in as little as 15 secs with eSie LVA volume LV analysis.

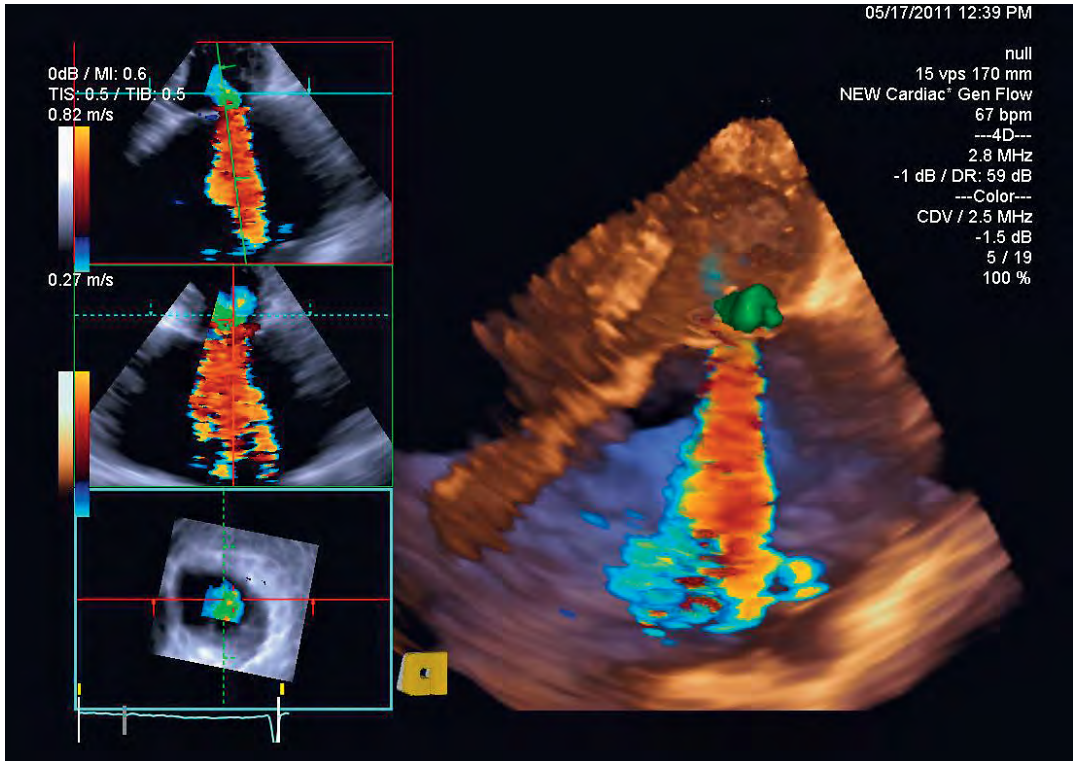


eSie PISA volume analysis performs volume PISA measurements without geometric assumptions in less than a minute.

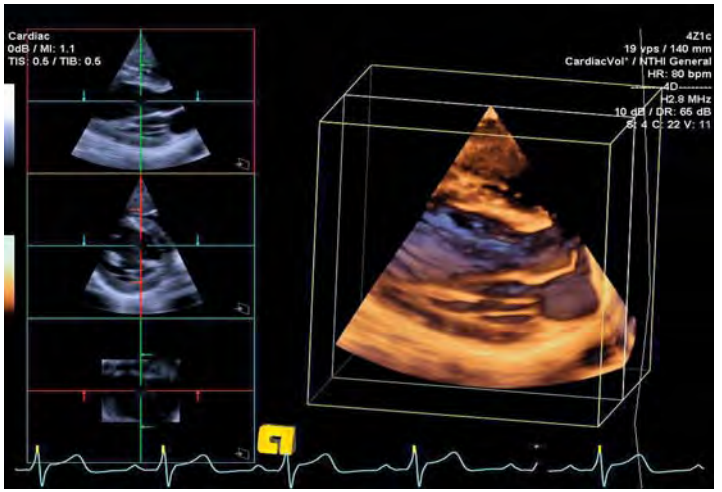


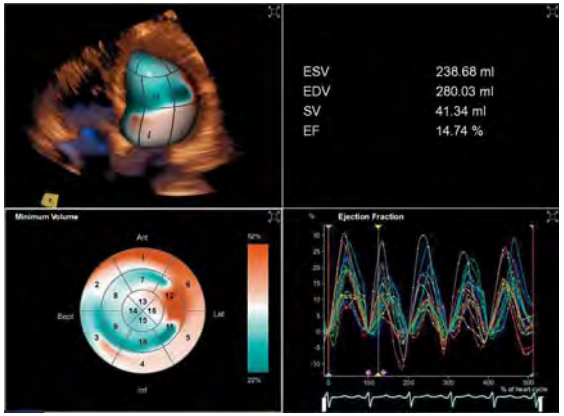
On-board volume RV functional analysis demonstrating systole.

eSie PISA volume analysis removes the guesswork in effective regurgitant orifice area calculations.



True full volume imaging in a 90° by 90° volume size while maintaining good temporal resolution of the parasternal long axis.





eSie LVA volume LV analysis performed by knowledge-based tracking algorithms.

Defining Tomorrow's Standards

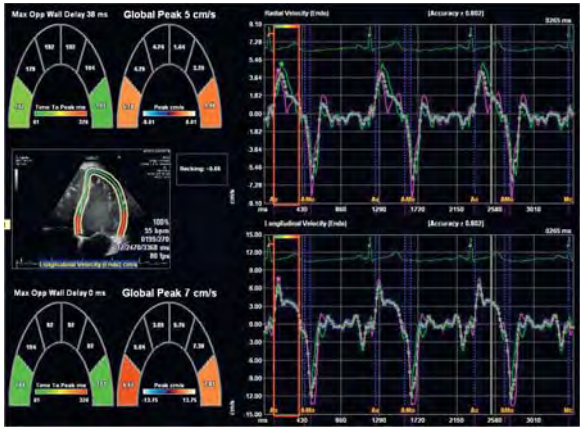
Investing in a premium performance system today doesn't always mean an investment in the future. With Siemens, however, the future is always at hand. We've pioneered many industry innovations in the past six decades – from developing the world's first ultrasound system to pioneering intracardiac echo. With the ACUSON SC2000 volume imaging ultrasound system, this history of innovation continues.

The ACUSON SC2000 system features the first volume intracardiac echo (ICE) catheter, the ACUSON AcuNav™ V. For more than a decade, ACUSON AcuNav technology has provided electrophysiologists and interventional cardiologists with high-quality, real-time diagnostic information about the structure of the heart, hemodynamic information and device guidance. Adding the benefits of volume imaging dramatically improves and simplifies the visualization of ablation catheter position and catheter-tissue contact as well as bubble formation during RF energy delivery. Not only is device guidance and navigation easier and more accurate, but the ACUSON AcuNav V catheter allows physicians to make more informed decisions about the use of local or general anesthesia for specific procedures.

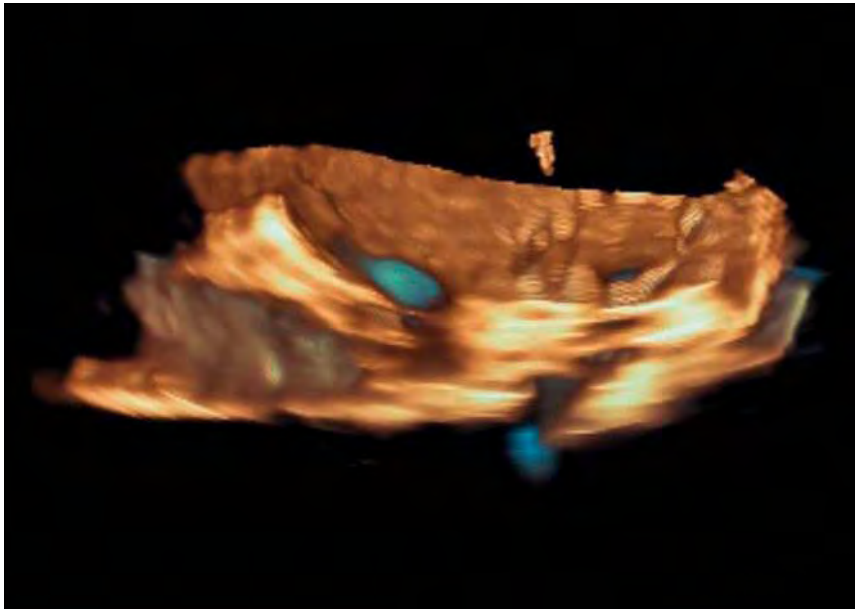
Another important Siemens innovation featured on the ACUSON SC2000 platform is eSie VVI™ velocity vector imaging technology for speckle tracking that delivers comprehensive 2D wall motion analysis. eSie VVI technology calculates strain, strain rate, rotation and twist. Using individual vectors to display direction and relative velocity of tissue from frame-to-frame eSie VVI technology instantaneously measures motion at any point in the cardiac cycle. This unique visual representation of cardiac contraction-relaxation mechanics allows easy gathering of information for a variety of applications, including rapid assessment of ventricular synergy in heart failure. This technology works on all transducer formats and is seamlessly integrated into the ACUSON SC2000 system's workflow protocols.

World's
1st
volume ICE
catheter

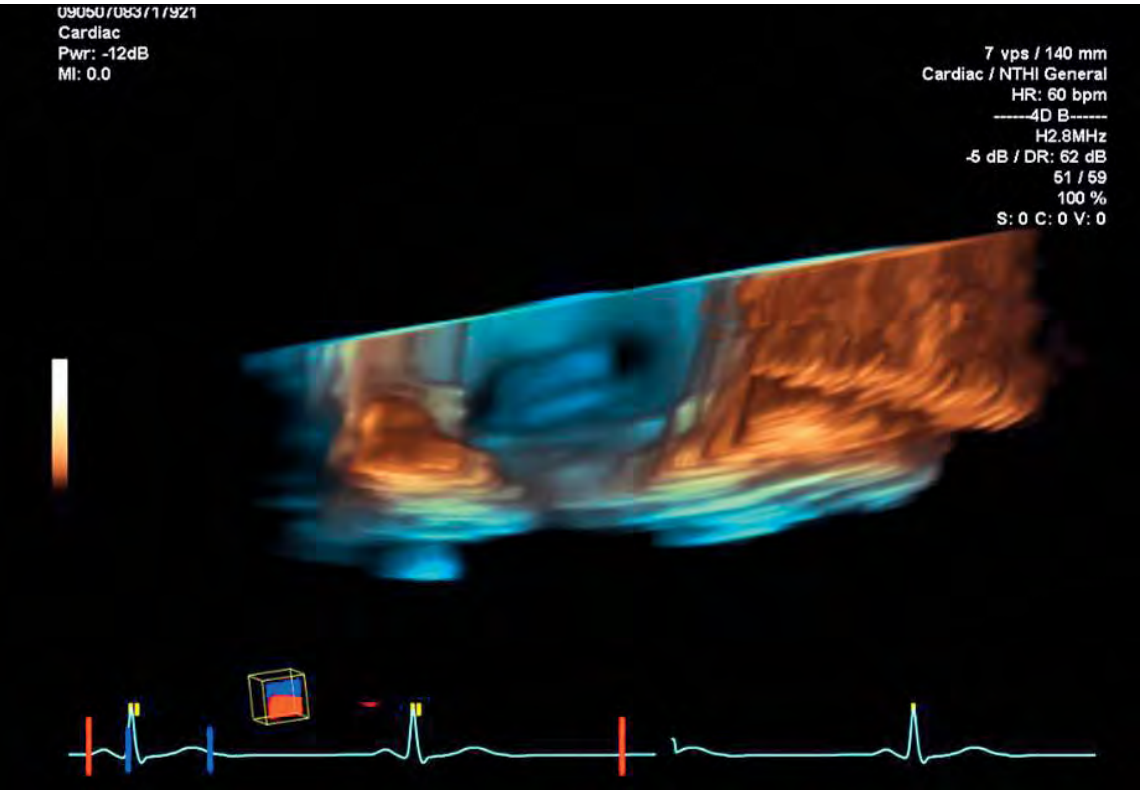
Defining Tomorrow's Standards



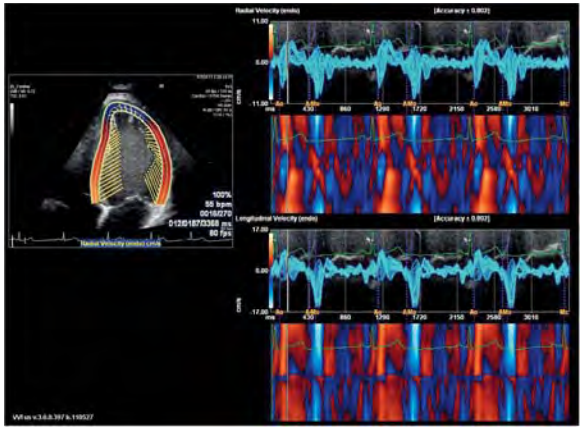
Opposing wall delay analysis with eSie VVI technology.



Volume intracardiac echocardiography with the ACUSON AcuNav V catheter shows pulmonary vein ostia with lasso ablation catheter around right ostia.

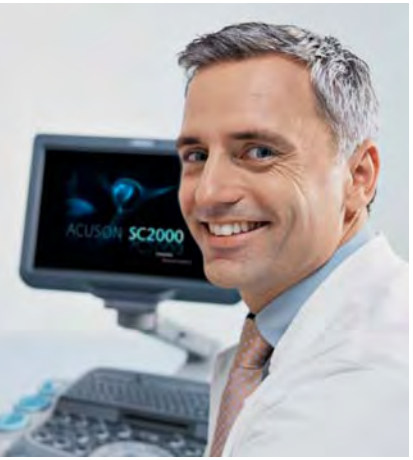


Intracardiac echocardiography with the ACUSON AcuNav V catheter shows pulmonary vein ostia.



Comprehensive LV mechanics analysis with eSie VVI technology.

Service and Support



Price is a Number. Value is Our Promise.

The ACUSON SC2000 system is designed to be compatible with a variety of options and future updates, offering you long-term investment protection and flexibility to fit your budget. Providing the right value with your purchase is one of the ways that Siemens earns the trust of our customers.

Service at Your Fingertips

The ACUSON SC2000 system features Ultrasound System Security, based on McAfee® Embedded Control, for the ultimate in protection against advanced persistent threats, viruses, malware and other executing software. The system also automatically connects to Siemens Remote Service™, a comprehensive remote support infrastructure, giving you access to a range of online service capabilities.

In fact, Siemens offers a variety of service plans that suit the needs of different healthcare environments — delivering both superior support and valuable cost savings for any size clinic, cardiology practice or medical setting. Siemens' coverage options provide protection from unexpected costs as well as fast and attentive service allowing you to stay focused on what matters most — the people in your care.

Standalone clinical images may have been cropped to better visualize pathology.

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